Notes on Breeding Aberrations of the Chalk Hill Blue: *Lysandra coridon* (Poda)

By Richard Revels*

Ab. semisyngrapha Tutt

My capture of a *L. coridon* ab. *infrasemisyngrapha* (Bright & Leeds) female (fig. 1) on Royston Heath in August 1969, prompted me to try breeding this beautiful aberration. Accordingly, I placed the specimen in a wooden box covered with netting, and containing some cut flowers in jam jars of water and a pot of growing horse-shoe vetch (*Hippocrepis comosa*). During the following two weeks, about 100 ova were laid on the *H. comosa*, as well as on the grass and other debris mixed with it.

The pot with the ova was then placed in an unused out-door cage, which proved to be a mistake, as nearly all the ova were eaten by earwigs or some other predator which must have been in the cage. Only three larvae were found in the spring of 1970, but these were successfully reared to produce an F1 generation of one male and two females, all of which were typical. These three individuals I placed in a breeding cage, but although no pairings were seen, plenty of fertile ova were laid. I took more care of the ova this time, putting them on a potted foodplant covered over with netting secured around the pot by a rubber band cut from an old car tyre inner tube, and placed the pot out-doors throughout the winter.

I had a good hatch from these in the spring of 1971, and in early May counted about 200 small larvae. But success was not to be had as easily as I had hoped, as at the end of May I could only find about 80 larvae. No predators could be seen by day, so I made an after dark search by torch light and found a number of slugs, one of which was half way through eating a larva. Altogether I removed about 20 slugs of all sizes from the four pots. How these slugs came to be there is a mystery, for the pots were in a washing-up bowl with water in it to sustain the growing plant and to act as a moat to keep out predators.

The resulting F2 generation consisted of 11 males, three typical females and five *semisyngrapha* females. These five were true *semisyngrapha* and more extreme than the original 1969 example. One of the best was chosen for breeding, and a typical wild male put with her. A pairing was seen and about 80 ova were laid.

I gathered up about half of the ova, and put them in a plastic tea strainer enclosed in a sleeve of fine nylon netting to keep out earwigs, etc. I then put this package in an out-door cage which kept out most of the rain, and so the ova had to be sprayed with water regularly throughout the winter until placed on the foodplant the following spring. The rest of the ova I netted over on the foodplant as before. Both these methods eventually proved successful, and I have since continued to split up the ova in this way so as to reduce the risk of loss.

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In the spring of 1972 I again had slug trouble, but managed to rear 19 males and 23 females, all of which were typical. From these, I obtained pairings between a male and an unrelated typical female (code 72a), also between a brother and sister (code 72b), and ova were laid from both stocks.

In 1973 I had a hatch of 12 males, 10 typical females and seven abs. from the 72a stock; and 17 males, 12 typical females and eight abs. from the 72b stock. Several of these abs. were very extreme ab. *semisyngrapha* (fig. 2).

In order to test if some of these 1973 males were carrying the aberration gene, I paired four of them with unrelated typical females, each of which laid about 30 ova before they were released. Owing to a shortage of potted *H. comosa* in the spring, I had to put all these ova together on one plant, but succeeded nonetheless in rearing 14 males, eight typical females and four *semisyngrapha* females.

From the foregoing, it would appear that *semisyngrapha* is inherited as a sex linked recessive, the aberration gene being passed down from a female ab. to all her sons (which look normal of course) but to none of her daughters in the F1 generation. A pairing between an F1 male and *any* female should produce about 50% *semisyngrapha* females. About 50% of the males should also be carrying the *semisyngrapha* gene, and so be able to produce this ab. in the next generation.

Ab. marginata Tutt

I captured a rather worn male ab. *marginata* on the Chilterns in August 1971, and decided it would be worth trying to breed from it. I took it home alive and put it with a freshly hatched female from one of my other stocks. A pairing took place the following day and in due course about 50 ova were laid. From these I obtained an F1 generation consisting of seven females and five males. These males had fairly good black margins, but were only transitional to ab. *marginata*. A pairing between one of these males and a female was obatined and about 80 ova resulted. This produced an F2 generation in late July 1973 consisting of seven females and eight males. These males ranged from those having about the typical width of black margins, to one very good ab. *marginata* (fig. 6).

From the above results I would think that *marginata* is a multifactorial aberration rather than a recessive, and if that be so, breeding from the best abs. each year should in a few generations produce some very black male abs. I tried to breed an F3 generation, but the larvae died during a spell of cold wet weather when they were set for changing to pupae, for which I suspect a fungal disease was responsible.

Ab. fowleri South

I had the good fortune to capture two female *L. coridon* ab. *fowleri* South. The first was in Dorset during early August 1970, and although I took it home alive, I did not have the

courage to try breeding from it. I took the second *fowleri* from the same locality in August 1972, and having by then gained experienced in breeding *coridon,* had no hesitation in risking spoiling the specimen (which was in very good condition) by putting it in my breeding cage. After two days it had layed 24 ova, and as it was still in good condition, I kept it for my collection (fig. 3). From these ova there was a good hatch in the spring of 1973, and in May I counted 16 larvae. A further count in mid June however, revealed only five healthy larvae, and two that had been "spun up" by a spider. The spider was removed, and the five larvae duly pupated. In due course I had an F1 generation of one male and four females, all of which were typical. From these I obtained a pairing, and about 60 fertile ova resulted.

The F2 generation in 1974 produced 14 typical males, six ab. *ultrafowleri* B. & L. males (fig. 4), 11 typical females and four ab. *fowleri* females. Most of the butterflies of this brood were below average size. The result of this breeding experiment is about what one would expect in an aberration inherited as a simple recessive.

From these I managed to obtain a pairing between one of the male *ultrafowleri* and a *semisyngrapha* female, and with some luck this should produce some interesting results in 1976.

Notes on Breeding the Ringlet: *Aphantopus hyperantus* (Linn.) ab. *pallens* Schultz and ab. *lanceolata* Shipp

By Richard Revels*

On 13th July, 1972 I had the good fortune to capture in Monks Wood, Hunts., a perfect male specimen of the very rare "Golden Albino" (ab. *pallens* Schultz) of *A. hyperantus* (L.). I took it home alive, and that evening photographed it while it was feeding (in the house) on the flowers of thistle and knapweed. A typical female *hyperantus* had emerged that day from several larvae I had found on the Chilterns in June, and having decided it would be worth an attempt at a pairing, next morning I put them in a wooden box covered with netting and containing flowers in two jam jars. An inspection at 10 a.m. revealed a pairing, and an hour later when they had parted, the *pallens,* still in perfect condtion, was removed for my collection. The female laid about 70 ova during the following week. They were not attached to anything, but presumably just dropped while flying about in the cage, and I collected them up each evening by touching them with a damp paint brush to which they readily adhered.

Having never before bred this species from ova, I was relieved to find that this is one of the more easy species to rear. The ova were split into two lots: one lot being placed on

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